

GWANDA STATE UNIVERSITY



FACULTY OF LIFE SCIENCES

DEPARTMENT OF ANIMAL SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE

Basic Animal Nutrition and Feeding

LAS 2103

First Semester Final main Examination Paper

January 2019

This examination paper consists of 3 pages

Time Allowed: 3 hours
Total Marks: 100
Special Requirements: None
Examiner's Name: Ms L. Sebele

INSTRUCTIONS

1. Answer **all** questions in Section A
2. Answer **only two** questions in Section B

MARK ALLOCATION

| QUESTION | MARKS |
|-------------------------------|--------------|
| SECTION A | 60 |
| SECTION B | 40 |
| TOTAL ATTAINABLE MARKS | 100 |

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SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION 1

- a.** Animal nutrition is an integral part of animal production. Give reasons for this. [6]
- b.** What are feeding standards? [5]
- c.** A ration usually consists of a number of ingredients. Give 3 reasons for this. [3]
- d.** Clearly outline how you would determine the amount of moisture in a feed. [6]

QUESTION 2

- a.** Describe the signs and symptoms of deficiencies of the following;
 - i) Carbohydrates. [4]
 - ii) Magnesium. [3]
 - iii) Potassium. [3]
 - iv) Iron. [3]
- b.** Feedstuffs used for feeding livestock can be classified into three major classes depending on the contents of fibre, moisture and nutrients. List the three classes [3]
- c.** What are the effects of oxidation of unsaturated fatty acids? [4]

QUESTION 3

- a.** Proximate analysis partitions feed into six major components based on their chemical properties. List the 6 components. [6]
- b.** Write short notes on factors influencing water intake. [10]
- c.** Outline the differences between aerobic and anaerobic respiration. [4]

SECTION B: ANSWER ONLY TWO QUESTIONS

QUESTION 4

- a.** Using a diagram, outline energy partitioning in ruminant animals and define each of the Stages. [8]
- b.** Outline the factors affecting the nutritive or feeding values of pastures. [12]

QUESTION 5

- a.** Discuss carbohydrate metabolism in ruminants. [13]
- b.** With the aid of a diagram, describe the oxygen debt. [7]

QUESTION 6

- a.** Outline factors that should be considered when computing ration for poultry. **[8]**
- b.** Describe the factors affecting digestibility of a feed. **[12]**

QUESTION 7

- a.** List six factors affecting nutrient requirements. **[6]**
- b.** Clearly describe how you would determine the amount of crude protein in a feed. **[14]**

END OF EXAMINATION